

Application No.: 10/625,391
Date of Amendment: 10/05/2005
Date of Office Action: 04/05/2005

In the claims:

Please amend the claims as follows:

22. (Original) A subterranean system, comprising:
a wellbore intersecting a formation; and
a well screen disposed within the wellbore and filtering fluid flowing between the formation and the wellbore, an annulus between the well screen and wellbore, the screen including a woven metal material filter element radially expanded from a first configuration to a second radially enlarged configuration within sand-flow inhibiting particulate matter deposited into the annulus, whereby fluid flow through the well screen is filtered when the filter element is in the second configuration.
23. (Original) The well system according to Claim 22, wherein the filter element includes a first layer of material with first openings therethrough, and a second layer of material with second openings therethrough, the second layer outwardly overlying the first layer, and the second openings being larger than the first openings.
24. (Original) The well system according to Claim 22, wherein perforations extend into the formation, wherein the perforations have sand-flow inhibiting particulate matter disposed therein, and wherein the filter element is positioned adjacent the perforations retaining the particulate matter within the perforations.
25. (Original) The well system according to Claim 22, the screen further including a perforated base pipe disposed within the filter element.
26. (Original) The well system according to Claim 22 further comprising gravel in the annulus between the screen and the wellbore, the filter element urging the gravel to displace in the annulus about the screen when the filter element is expended from the first to the second configuration.

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27. (Original) The well system according to Claim 22, wherein the filter element is circumferentially pleated.
28. (Original) A method of servicing a subterranean well having a wellbore, the method comprising the steps of:
conveying a screen into the well, the screen being in a first radially compressed configuration thereof, and the screen including a woven metal material filter element, defining an annulus between the screen and the wellbore;
positioning the screen within the well;
depositing sand-flow inhibiting particulate matter in the annulus between the screen and the wellbore; and then
expanding the screen to a second radially enlarged configuration, fluid flow through the screen being filtered when the screen is in the second configuration.
29. (Original) The method according to Claim 27, wherein, in the conveying step, the filter element includes a first layer of material with first openings therethrough, and a second layer of material with second openings therethrough, the second layer outwardly overlying the first layer, and the second openings being larger than the first openings.
30. (Original) The method according to Claim 27 further comprising the step of extending perforations outwardly into a formation intersected by the wellbore.
31. (Original) The method according to Claim 30, wherein the expanding step further comprises radially expanding the screen so that it is adjacent the perforations.
32. (Original) The method according to Claim 30, wherein in the expanding step, the radially expanded screen retains the particulate matter in the perforations.
33. (Original) A method of servicing a subterranean well having a wellbore, the method comprising the steps of:
conveying a screen into the wellbore, the screen being in a first radially

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compressed configuration thereof, the screen including a filter element, the screen further including a perforated base pipe disposed within the filter element, defining an annulus defined between the screen and the wellbore;

positioning the screen within the well;

depositing sand-flow inhibiting particulate matter in the annulus; and then

expanding the screen to a second radially enlarged configuration.

34. (Original) The method according to Claim 33, wherein the expanding step further comprises radially enlarging the base pipe.

35. (Original) A method of servicing a subterranean well, the method comprising the steps of:

conveying a screen into the well, the screen being a first radially compressed configuration thereof;

positioning the screen within the well; and

expanding the screen into a second radially enlarged configuration thereof by radially enlarging the screen within gravel disposed in an annulus formed between the screen and a wellbore of the well, whereby fluid flow through the screen is filtered when the screen is in the second configuration.

36. (Original) The method according to Claim 35, wherein the expanding step further comprises displacing the gravel in the annulus about the screen by expansion of the screen.

37. (Currently Amended) A method of sand control in a subterranean well comprising the steps of:

inserting a radially expandable sand-control screen jacket assembly into the well and thereafter pumping sand-control medium into the annular space between the outer surface of the screen jacket assembly and the wellbore wall;

inserting an expansion tool into the well; and

moving the expansion tool through the screen jacket assembly causing the screen jacket assembly to radially expand.

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38. (Currently Amended) A method of sand control in a subterranean well according to Claim 37 wherein the packing medium substantially fills the annular space between the outer surface of the screen jacket assembly and the wellbore wall after the step of moving the expansion tool through the screen jacket assembly.

39. (Currently Amended) A method of sand control in a subterranean well comprising the steps of:

inserting an expansion tool into the well; then

inserting a radially expandable screen jacket assembly into the well above the expansion tool; then

pumping sand-control medium into the annular space between the outer surface of the screen jacket assembly and the wellbore wall; and then

moving the expansion tool through the screen jacket assembly causing the screen jacket assembly to radially expand.

40. (Currently Amended) A method of sand control in a subterranean well according to Claim 39, wherein the packing medium substantially fills the annular space between the outer surface of the screen jacket assembly and the wellbore wall, after the step of moving the expansion tool through the screen jacket assembly.

41. (Original) An improved method of treating a subterranean hydrocarbon-bearing formation penetrated by a perforated section of a cased wellbore comprising the steps of:

pumping through the cased wellbore and the perforations and into the formation a treating mixture comprising a particulate material suspended in a fluid and depositing the mixture in fractures in the formation;

selecting a circumferentially expandable mesh screen of a size to pass through the casing when unexpanded and to engage the inside of the perforated casing section when expanded and with an expanded mesh size sufficient to block the flow of the particulate material therethrough;

moving the screen through the casing and positioning the screen in the perforated section of the casing;

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circumferentially expanding the screen against the inside of the casing wall and across the perforations; and

flowing hydrocarbons from the formation through the expanded screen while the screen prevents the particulate material from flowing into the well.

42. (Original) An improved method of removing and separating hydrocarbons from a subterranean hydrocarbon-bearing formation penetrated by a perforated section of a cased wellbore wherein the hydrocarbons are mixed with formation materials, comprising the steps of:

pumping through the cased wellbore, the perforations and into the formation a treating mixture comprising a particulate material suspended in a fluid and depositing the mixture in fractures in the formation;

selecting a circumferentially expandable mesh screen of a size to pass through the casing when unexpanded and to engage the inside of the perforated casing section when expanded and with an expanded mesh size sufficient to prevent the flow of the particulate material therethrough;

moving the screen through the casing and positioning the screen in the perforated section of the casing;

circumferentially expanding the screen against the inside of the casing wall and across the perforations;

flowing hydrocarbons from the formation into the casing through perforations and the expanded screen while the screen prevents the particulate material from flowing into the well; and

removing hydrocarbons from the well.

43. (Original) A method of servicing a subterranean well having a wellbore intersecting a formation, the method comprising the steps of:

conveying an expandable screen assembly into the well, thereby creating an annular space between the screen assembly and the wellbore;

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disposing sand-flow inhibiting particulate matter into the annulus; and thereafter
radially expanding the screen assembly.

44. (Original) A method as in Claim 43 wherein the screen assembly comprises a radially expandable perforated basepipe disposed within the screen.
45. (Original) A method as in Claim 43 wherein the screen assembly comprises a pleated filter element.
46. (Original) A method as in Claim 43 wherein the wellbore is cased.
47. (Original) A method as in Claim 43 further comprising the step of flowing fluid through the annular space and screen assembly.
48. (Original) A method as in Claim 43 further comprising the step of extending perforations outwardly into the formation.
49. (Original) A method as in Claim 48 further comprising the step of disposing sand-flow inhibiting particulate matter into the perforations extending into the formation.
50. (Original) A method as in Claim 49 wherein the expanding step further comprises expanding the screen assembly so that it is adjacent the perforations.
51. (Original) A method as in Claim 50 further comprising the step of retaining the particulate matter in the perforations extending outwardly into the formation.
52. (Original) A method as in Claim 51 wherein the wellbore is cased and wherein the expanding step further comprises expanding the screen assembly so that it is in contact with the cased wellbore.

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53. (Original) A method as in Claim 43 wherein the sand-flow inhibiting particulate material is gravel.
54. (Original) A method as in Claim 43 wherein the screen assembly further comprises a screen shroud.

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